

## Claims

- 5 1. A filter and blower unit for breathing masks or  
bonnets with a breathing air filter that is driven by  
a direct current motor and designed for use in  
potentially explosive areas, characterized in that  
the direct current motor comprises a fixed stator  
10 coil module (1) and a magnetic rotor (12) rotating  
around the peripheral surface of said stator coil  
module (1), in that the coils (5) located at the  
stator coil module (1) and their electric terminals  
are embedded in a non-conductive casting compound  
15 (6), in that a motor control module (8) and a voltage  
converter module are located upstream of the stator  
coil module (1) for power input via shielded electric  
lines (7) that are also embedded in a non-conductive  
casting compound (6), and in that the required power  
20 is supplied at a current to voltage ratio at which  
the voltage does not exceed the value required for  
intrinsic safety.
- 25 2. The filter and blower unit according to claim 1,  
characterized in that the magnetic rotor (12)  
comprises a shaft (13) centered in a pot-type case  
(11) that is pivoted in a bearing shell (3) formed in  
the center of the stator coil module as well as  
magnets (12a) attached peripherally to its inner  
30 surface, and blades (14) attached peripherally to its  
outer surface.
- 35 3. The filter and blower unit according to claim 1,  
characterized in that the stator coil module (1), the  
motor control module (8) and the voltage converter  
module (9) are located on a base circuit board (10)

on which the electric connecting lines (7) run internally or are embedded in a casting compound.

- 5     4. The filter and blower unit according to claim 1, characterized in that power is supplied from an intrinsically safe accumulator or battery pack (15).